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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
10/725,312	12/02/2003	Norihiro Yamamoto	R2184.0283/P283	4926

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EXAMINER	
CHOW, LIXI	

ART UNIT	PAPER NUMBER
2627	

MAIL DATE	DELIVERY MODE
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Please find below and/or attached an Office communication concerning this application or proceeding.

The time period for reply, if any, is set in the attached communication.

Office Action Summary	Application No.	Applicant(s)	
	10/725,312	YAMAMOTO, NORIHIRO	
	Examiner	Art Unit	
	Lixi Chow	2627	

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE *3* MONTH(S) OR THIRTY (30) DAYS, WHICHEVER IS LONGER, FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

1)☒ Responsive to communication(s) filed on *22 February 2008*.

2a)☐ This action is **FINAL**. 2b)☒ This action is non-final.

3)☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

4)☒ Claim(s) *2,3,5-7 and 10-25* is/are pending in the application.

4a) Of the above claim(s) *6,7,12 and 14-25* is/are withdrawn from consideration.

5)☐ Claim(s) _____ is/are allowed.

6)☒ Claim(s) *2, 3, 5, 10, 11 and 13* is/are rejected.

7)☐ Claim(s) _____ is/are objected to.

8)☐ Claim(s) _____ are subject to restriction and/or election requirement.

Application Papers

9)☐ The specification is objected to by the Examiner.

10)☐ The drawing(s) filed on _____ is/are: a)☐ accepted or b)☐ objected to by the Examiner.

Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).

Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).

11)☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

Priority under 35 U.S.C. § 119

12)☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).

a)☐ All b)☐ Some * c)☐ None of:

1.☐ Certified copies of the priority documents have been received.

2.☐ Certified copies of the priority documents have been received in Application No. _____.

3.☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

* See the attached detailed Office action for a list of the certified copies not received.

Attachment(s)

1) ☐ Notice of References Cited (PTO-892)
2) ☐ Notice of Draftsperson's Patent Drawing Review (PTO-948)
3) ☐ Information Disclosure Statement(s) (PTO/SB/08) Paper No(s)/Mail Date _____.
4) ☐ Interview Summary (PTO-413) Paper No(s)/Mail Date. _____ .
5) ☐ Notice of Informal Patent Application
6) ☐ Other: _____.

DETAILED ACTION

Continued Examination Under 37 CFR 1.114

1. A request for continued examination under 37 CFR 1.114, including the fee set forth in 37 CFR 1.17(e), was filed in this application after final rejection. Since this application is eligible for continued examination under 37 CFR 1.114, and the fee set forth in 37 CFR 1.17(e) has been timely paid, the finality of the previous Office action has been withdrawn pursuant to 37 CFR 1.114. Applicant's submission filed on 2/22/08 has been entered.

Claim Rejections - 35 USC § 102

2. The following is a quotation of the appropriate paragraphs of 35 U.S.C. 102 that form the basis for the rejections under this section made in this Office action:

> A person shall be entitled to a patent unless –
>
> (b) the invention was patented or described in a printed publication in this or a foreign country or in public use or on sale in this country, more than one year prior to the date of application for patent in the United States.

3. Claims 2, 3, 5, 10, 11 and 13 are rejected under 35 U.S.C. 102(b) as being anticipated by Salmonsen et al. (US 2002/0136121; hereafter Salmonsen).

Regarding claim 1:

Salmonsen discloses an optical data recording method, comprising the steps of:

interrupting an operation of recording data in an optical data recording medium when a predetermined amount of data to cover a specified length along the radial direction of the optical disk is continuously recorded in the optical data recording medium by using a laser beam emitted from a laser (see paragraphs [0018]; in paragraph [0018], Salmonsen mentions that the evaluation is performed on a large number of frames, which can be interpreted as a predetermined amount of data to cover a specified length along the radial direction of the disk;

also see paragraphs [0037]-[0038]; reading data within one full rotation of the disk suggests that at least a predetermined amount of data is continuously recorded on the disk);

measuring a recording state of the optical data recording medium immediately before the interruption (see paragraph [0019], lines 7-10);

correcting a recording power of the laser beam for a next recording operation in the optical data recording medium based on the measured recording state (see paragraph [0019], lines 10-11); and

starting the next recording operation by using the laser beam with the determined recording power in the optical data recording medium at a position immediately after the interruption (see paragraph [0019], lines 11-15),

wherein in the step of interrupting, the predetermined amount of data is determined so that a time period required for completing recording of the predetermined amount of data is shorter than a time period over which a recording quality degrades due to a rise of a temperature of the laser (see paragraph [0038]; the time period required for completing recording of the predetermined amount of data is always shorter than time period over which the recording quality degrades due to temperature, because Salmonsen performs periodic re-evaluation).

Regarding claim 3:

Salmonsen discloses an optical data recording method, comprising the steps of:

interrupting an operation of recording data in an optical data recording medium when a predetermined amount of data to cover a specified length along the radial direction of the optical disk is continuously recorded in the optical data recording medium by using a laser beam emitted from a laser (see paragraphs [0018]; in paragraph [0018], Salmonsen mentions that the

evaluation is performed on a large number of frames, which can be interpreted as a predetermined amount of data to cover a specified length along the radial direction of the disk; also see paragraphs [0037]-[0038]; reading data within one full rotation of the disk suggests that at least a predetermined amount of data is continuously recorded on the disk);

measuring a recording state of the optical data recording medium immediately before the interruption (see paragraph [0019], lines 7-10);

correcting a recording power of the laser beam for a next recording operation in the optical data recording medium based on the measured recording state (see paragraph [0019], lines 10-11); and

starting the next recording operation by using the laser beam with the determined recording power in the optical data recording medium at a position immediately after the interruption (see paragraph [0019], lines 11-15),

wherein in the step of interrupting, the predetermined amount of data is determined so that a length along a radial direction of the optical data recoding medium covered by the predetermined amount of data is shorter than a length over which a recording quality degrades due to a fluctuation of a sensitivity of a recording layer of the optical data recoding medium (see paragraph [0036]; also see paragraphs [0039] and [0041]; the optimum recording power greatly varies from the inside of the disk to the outside of the disk, and re-evaluation process is performed at various locations to compensate for the fluctuation of a sensitivity of the disk).

Regarding claim 5:

Salmonsen discloses an optical data recording method, comprising the steps of:

interrupting an operation of recording data in an optical data recording medium when a predetermined amount of data to cover a specified length along the radial direction of the optical disk is continuously recorded in the optical data recording medium by using a laser beam emitted from a laser (see paragraphs [0018]; in paragraph [0018], Salmonsen mentions that the evaluation is performed on a large number of frames, which can be interpreted as a predetermined amount of data to cover a specified length along the radial direction of the disk; also see paragraphs [0037]-[0038]; reading data within one full rotation of the disk suggests that at least a predetermined amount of data is continuously recorded on the disk);

measuring a recording state of the optical data recording medium immediately before the interruption (see paragraph [0019], lines 7-10);

correcting a recording power of the laser beam for a next recording operation in the optical data recording medium based on the measured recording state (see paragraph [0019], lines 10-11); and

starting the next recording operation by using the laser beam with the determined recording power in the optical data recording medium at a position immediately after the interruption (see paragraph [0019], lines 11-15),

wherein in the step of correcting, a change of the recording power in each correction is restricted to be less than a predetermined value (see paragraphs [0054]-[0055], it is inherent that the change of the recording power is restricted to be less than a predetermined value, so that data can be recorded at highest quality).

Regarding claim 10:

Salmonsen discloses an optical data recording method, comprising the steps of:

interrupting an operation of recording data in an optical data recording medium when a predetermined amount of data to cover a specified length along the radial direction of the optical disk is continuously recorded in the optical data recording medium by using a laser beam emitted from a laser (see paragraphs [0018]; in paragraph [0018], Salmonsen mentions that the evaluation is performed on a large number of frames, which can be interpreted as a predetermined amount of data to cover a specified length along the radial direction of the disk; also see paragraphs [0037]-[0038]; reading data within one full rotation of the disk suggests that at least a predetermined amount of data is continuously recorded on the disk);

measuring a recording state of the optical data recording medium immediately before the interruption to measure a recording quality (see paragraph [0019], lines 7-10);

correcting a recording power of the laser beam for a next recording operation in the optical data recording medium based on the measured recording quality (see paragraph [0019], lines 10-11); and

starting the next recording operation by using the laser beam with the determined recording power in the optical data recording medium at a position immediately after the interruption (see paragraph [0019], lines 11-15),

wherein in the step of measuring, the recording quality is measured in a seek operation performed when starting the next recording operation after the interrupted recording operation, a setting being made so that a reading quality is an optimum during the measurement of the recording quality, and the setting being made so that the recording quality is an optimum after the measurement of the recording quality (see paragraphs [0030], [0032] and [0045] and Fig. 4).

Regarding claim 11:

Salmonsen discloses the optical data recording method as claimed in claim 10, wherein in the step of measuring, an offset of a focus position of a focus servo is set so that the reading quality is an optimum during the measurement of the recording quality in the seek operation, and the offset of the focus position is set so that the recording quality is an optimum after the measurement of the recording quality (see paragraph [0044]; since focus signal is being monitored during the recording, it is reasonable to conclude that this limitation is met).

Regarding claim 13:

Claim 13 recites similar limitations as in claims 8 and 11; hence claim 13 is rejected under the same reason set forth above.

Response to Arguments

4. Applicant's arguments filed 2/22/08 have been fully considered but they are not persuasive.

Basically, Applicant argues that "a trigger based on time cannot be said to be the equivalent of a trigger based on an amount of data". In other words, Applicant argues that Salmonsen does not teach that "a predetermined amount of data to cover a specified length along the radial direction of the optical disk is continuously recoded in the optical data recording medium". However, according to Salmonsen, a predetermined amount of data covering at least a specified length in the radial direction of the optical disk is indeed continuously recorded on the disk (see paragraph [0018], [0037] and [0038]). Although the triggers 350 may be based on the amount of time elapsed; however, during that time period, at least a predetermined amount of data has been continuously recorded. Furthermore, after the recording is interrupted in Salmonsen, the data within one full rotation of the disk is evaluated. This suggests that a

predetermined amount of data has been recorded prior to the interruption. The purpose of Salmonsen's invention is to regularly evaluate the recording quality when certain amount of data has been recorded and when certain time has passed, so as to provide an optimum recording characteristics. There is no point of performing the evaluation step when there is not data recorded even after certain amount of time has passed. This implies that the timer is only activated when recording took place. Therefore, claims 2, 3, 5, 10, 11 and 13 are not patentable over Salmonsen.

Conclusion

5. Any inquiry concerning this communication or earlier communications from the examiner should be directed to Lixi Chow whose telephone number is 571-272-7571. The examiner can normally be reached on Mon-Fri, 8:30am to 6:00pm.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Wayne Young can be reached on 571-272-7582. The fax phone number for the organization where this application or proceeding is assigned is 571-273-8300.

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see http://pair-direct.uspto.gov. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free). If you would like assistance from a USPTO Customer Service Representative or access to the automated information system, call 800-786-9199 (IN USA OR CANADA) or 571-272-1000.

3/28/08

/Wayne R. Young/
Supervisory Patent Examiner, Art Unit 2627